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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,690	12/11/2000	Parviz Soroushian		3238

7590 08/23/2002

PARVIZ SOROUSHIAN
DPD, INC.
2000 TURNER STREET
LANSING, MI 48906

EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

09/733,690

Applicant(s)

SOROUSHIAN, PARVIZ

Examiner

Judson H Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The claims submitted by Applicant on 7/29/2002 numbered 1-10 have been renumbered as claims 17-26, as per Rule 37 CFR 1.126. See the MPEP section 608.01(j).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 21 (numbered claim 5 by Applicant) is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. No language has been found in the specification which describes heat treating the pseudoelastic element in free condition after establishment of the memory shape.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 is also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has failed to disclose the purpose of the heat treatment in the free condition. Since heat treatment in the free condition for establishing the memory shape would reduce the performance of the device, therefore the time and levels of heat involved and the purpose of the heat treatment procedure need to be explained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 18, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kleshinski. Kleshinski discloses a spring 50 comprising a psuedoelastic element that has a memory shape with at least one segment 28 where at least one of flexural and torsional deformations concentrate as shown in figure 6 and as described in column 5 lines 19-44. In regard to the claim language concerning force levels varying by less than 30% over more than 40% of the maximum deflection capacity, see Kleshinski figure 4.

In regard to claim 18 (numbered 2 by Applicant), see figures 2 and 3 which show segments outside of the region of concentrated deformation stiffened by having a greater diameter than the deformation region.

In regard to claim 22 (numbered claim 6 by Applicant), every spring that is subjected to repeated load applications has had force levels applied at least once to the spring.

In regard to claim 23, see Kleshinski column 5 lines 37-39

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kleshinski in view of McDaniel et al. See Kleshinski column 2 lines 46-50 describing the use of Nitinol wire.

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While Kleshinski does not specify the material used in Nitinol wire, McDaniel et al. does this in column 6 lines 55-57 and goes on to describe other shape memory metals in column 6 line 57 to column 7 line 5. Since Kleshinski and McDaniel et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have broadened the search for an appropriate shape memory alloy to include the elements specified by McDaniel et al. in order to make the device cheaper and/or to make it operate in a broader linear range and thus improve the performance of the device.

Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kleshinski in view of Abrams et al. Kleshinski discloses the spring but does not disclose heat treating the spring. However Abrams et al. teaches heat treating shape memory alloys in column 2 lines 35-50. Since Kleshinski and Abrahms et al. are both from the same field of endeavor, it would have been obvious at the time the invention was made for one of ordinary skill in the art to have heat treated the spring as taught by Abrahms et al. in order to improve the performance of the spring.

Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese reference 62-296746 A in view of Kleshinski. Japanese reference 62-296746 discloses a brush holder with a psuedoelastic element having force levels varying by less than 30% over more than 40% of the maximum deflection capacity but does not disclose the psuedoelastic element having a segment where flexural and torsional deformations concentrate. However Kleshinski teaches a psuedoelastic element with segments where flexural and torsional deformations concentrate in column 5 lines 19-44. Since Japanese reference 62-296746 and Kleshinski are both from the same field of endeavor, it would have been obvious at the time the invention was made for one

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of ordinary skill in the art to have utilized segments where flexural and torsional deformations concentrate in order to make the brush holder device simpler and therefore less expensive.


In regard to claim 25 see Japanese reference 62-296746 which shows deformation levels while the brush holder is being loaded and unloaded.

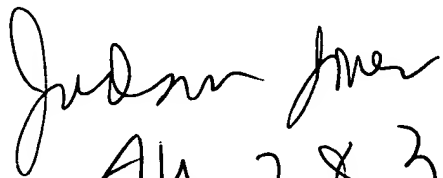
In regard to claim 26, the spring device shown in Kleshinski figure 6 is inherently partly fixed against lateral deflections because the phrase "partly fixed" is so broad that any device having any kind of lateral stability meets the claim language.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ 
August 12, 2002


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